

**LEMBAR PENGESAHAN**  
**PUBLIKASI ARTIKEL MELALUI PRESENTASI ORAL**  
**DALAM SEMINAR INTERNASIONAL**

Judul Artikel : *Molecular Analysis: Moving Forward from RAPD Based Analysis to Sequencing Method on Captive Sumatran Elephant Diversity in Elephant Training Center Way Kambas National Park*  
Dipresentasikan dalam: International Conference on Biological Sciences (ICBS)  
Pelaksanaan Seminar : 10 s.d. 11 Oktober 2019  
Penyelenggara : Universitas Gadjah Mada bekerja sama dengan Universiti Tun Hussein Onn Malaysia  
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Bandar Lampung, 20 Januari 2020  
Penulis,



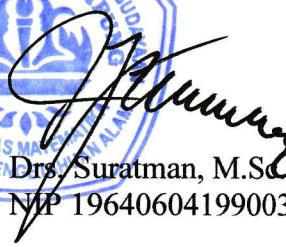
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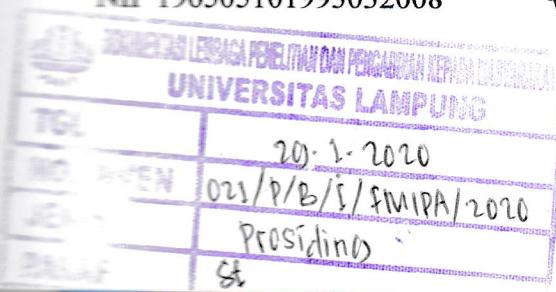


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**PENGESAHAN  
PUBLIKASI ARTIKEL ILMIAH**



**Judul Artikel:**  
**Molecular Analysis: Moving Forward from RAPD Based Analysis to Sequencing Method on Captive Sumatran Elephant Diversity in Elephant Training Center Way Kambas National Park**

**Dipresentasikan oral pada:  
International Conference on Biological Sciences (ICBS) 2019**

**Tim Penulis:**  
**drh. Eko Agus Sribianto, M.Sc.**  
**Dra. Elly L. Rustiati, M.Sc.**  
**Priyambodo, S.Pd., M.Sc.**  
**Dr. Yanti Yulianti, M.Si.**  
**Elsa Virnarenata**  
**Dian Neli Pratiwi, S.Si.**  
**Tika Novianasari, S.Si.**  
**drh. Liza Angeliya, M.Sc.**

**UNIVERSITAS LAMPUNG  
2020**

## Halaman sampul program book ICBS 2019

The cover features the ICBS 2019 logo at the top center, which includes a stylized bird and the acronym 'ICBS' in green. Below the logo is the text 'The 6<sup>th</sup> International Conference on Biological Sciences'. The background is white with a decorative border at the bottom. A collage of four images is positioned above the border: a white flower, a white cockatoo, a cluster of viruses, and a person holding a globe. To the right of the collage is a large graphic element consisting of two overlapping chevrons, one yellow and one green. The main title 'Program and Abstracts Book' is centered below the collage in a large, serif font. Below the title, the text 'Organized by' is followed by the Faculty of Biology logo and the text 'Faculty of Biology Universitas Gadjah Mada'. To the right, the text 'In Cooperation with:' is followed by the KOBi logo and the text 'Konsorsium Biologi Indonesia'. At the bottom left is the UTHM logo with the text 'UTHM Universiti Tun Hussein Onn Malaysia'. At the bottom right is the Publishers and Publications Board logo with the text 'Publishers and Publications Board Universitas Gadjah Mada'.

**Program and Abstracts Book**

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### L3. Panitia Kegiatan ICBS 2019

Abstract and Program Book 6 Yogyakarta, 10-11 October, 2019



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The 6<sup>th</sup> International Conference on Biological Sciences

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**Yasushi Yoshioka**, Division of Biological Science, Graduate School of Science, Nagoya University, Nagoya, JAP  
**YektiAsihPurwestri**, Faculty of Biology, Universitas Gadjah Mada, Yogyakarta, IDN

## L5. Susunan Acara ICBS 2019

 <b>The 6<sup>th</sup> International Conference on Biological Sciences</b>		
<b>CONFERENCE PROGRAM</b>		
<b>Day 1.</b> <i>Thursday, October 10<sup>th</sup> 2019</i>		
TIME	PROGRAM	PLACE
07.00 - 08.00	<b>Registration</b>	Ballroom lobby
08.00 - 09.00	<b>Opening Ceremony</b> <ul style="list-style-type: none"> <li>○ National anthem Indonesia Raya</li> <li>○ Student Dance Performance</li> <li>○ Report and Opening Remarks:           <ul style="list-style-type: none"> <li>○ Dr. med.vet. Hendry TSG Saragih Chairperson of ICBS 2019</li> <li>○ Prof. Budi SetiadiDaryono, M.Agr.Sc., Ph.D. Dean of Faculty Biology, Universitas Gadjah Mada</li> <li>○ Prof. Ir. Panut Mulyono, M.Eng., D.Eng. Rector of Universitas Gadjah Mada</li> </ul> </li> </ul>	Ballroom
09.00 – 09.10	<b>Agreement Signing</b>	Ballroom
09.10 – 09.20	<b>Photo Session</b> (with All Participant and invited guests)	Ballroom
09.20 – 10.05	<b>Keynote Session 1. Prof. Dr. Purnomo, M.S.</b> <b>Title:</b> Variation in Species Population as A Challenge On Intraspesies Plant Classification <b>Session Chair:</b> Rina Sri Kasiandari, S.Si. Ph.D.	Ballroom
10.05 – 10.20	<b>Coffee Break</b>	Ballroom lobby
10.20 – 11.05	<b>Keynote Session2. Prof. Dr. rer. nat. Bernhard Grimm</b> <b>Title:</b> Metabolism, Structure and Function of Chlorophyll <b>Session Chair:</b> Dr. KumalaDewi, M.Sc.	Ballroom
11.15 – 12.00	Invited Speaker 1. <b>Dr. EkoAgusSuyono, M.App.Sc</b> <b>Session Chair:</b> Dr. Bambang Retnoaji, M.Sc. Invited Speaker 2. <b>Assoc. Prof. Dr. Alona C. Linatoc</b> <b>Session Chair:</b> Dr. Abdul RazaqChasani, S.Si., M.Sc.	Sunflower Irish
12.00 – 13.00	<b>Lunch Break /Poster Presentation</b>	Ballroom lobby
13.00 – 15.00	<b>Parallel Session 1</b>	1. Lotus 2. Tulip 3. Sunflower 4. Heliconia 5. Irish 6. Hibiscus 7. Dahlia
15.00 – 15.15	<b>Coffee Break</b>	3 <sup>rd</sup> Floor
15.15 – 17.15	<b>Parallel Session 2</b>	1. Lotus 2. Tulip 3. Sunflower 4. Heliconia 5. Irish 6. Hibiscus 7. Dahlia

**Day 2.** Friday, October 11<sup>th</sup> 2019

TIME	PROGRAM	PLACE
07.30 – 08.15	Registration	Ballroom lobby
08.15 – 08.25	Indonesia Folksongs by KMP Student Choir	Ballroom
08.30 – 09.20	<b>Keynote Session 3.</b> Prof. Em. Dr. Datin M.M. <b>Title:</b> Biodiversity and Humanity: A Possible Future Scenario <b>Session Chair:</b> Dr. Siti Sumarmi	Ballroom
09.20 – 09.35	Coffee Break	Ballroom lobby
09.35 – 10.20	Invited Speaker 3. Prof. Luke Daniels Session Chair: Dr. Miftahulilm, M.Si.  Invited Speaker 4. Yasushi Yoshioka, Ph. D Session Chair: Drs. Hari Purwanto, M.P., Ph.D.	Sunflower
10.20 – 11.50	<b>Parallel Session 3</b>     	<ol style="list-style-type: none"> <li>1. Carnation</li> <li>2. Tulip</li> <li>3. Sunflower</li> <li>4. Heliconia</li> <li>5. Irish</li> <li>6. Hibiscus</li> <li>7. Dahlia</li> </ol>
11.50– 13.00	Lunch Break	Ballroom lobby
13.00 – 15.30	<b>Parallel Session 4</b>     	<ol style="list-style-type: none"> <li>1. Carnation</li> <li>2. Tulip</li> <li>3. Sunflower</li> <li>4. Heliconia</li> <li>5. Irish</li> <li>6. Hibiscus</li> <li>7. Dahlia</li> </ol>
15.30 – 15.45	Coffee Break	Ballroom lobby
15.45 – 16.00	Summary Session	Ballroom
16.00 – 16.30	<b>Award Conferral (best Presenter)</b> <b>Closing Ceremony</b> By Vice Dean of Research, Community Services, Collaboration, and Alumnae	Ballroom

# **Molecular Analysis: Moving forward from RAPD Based Analysis to Sequencing Method on Captive Sumatran Elephant Diversity in Elephant Training Center**

## **Way Kambas National Park**

Eko A. Srihanto<sup>a</sup>, Elly L. Rustiati<sup>b</sup>, Priyambodo<sup>b</sup>, Yanti Yulianti<sup>b</sup>, Elsa Virnarenata<sup>b</sup>, Dian N. Pratiwi<sup>b</sup>, Tika Novianasari<sup>b</sup>, Liza Angeliya<sup>a</sup>

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**Abstract.** Random Amplified Polymorphism DNA (RAPD) is well known Polymerase Chain Reaction (PCR)-based method that use several random primers to identify the diversity of individual. The RAPD method resulting a DNA fragment profile. The DNA fragment profile from RAPD method is very important to make a whole molecular data of captive sumatran elephant in Elephant Training Center (ETC), Way Kambas National Park (WKNP). Understanding the DNA fragment profile of captive sumatran elephant in ETC WKNP based on PCR-RAPD method by using 4 different primers has been conducted under multiple year grant of Ministry of Research and Technology Higher Education under multiple year grant of Ministry of Research and Technology Higher Education, Indonesia. The DNA was well extracted by invasive sample, the whole blood, and well performed on agarose gel electrophoresis. PCR-RAPD was done by using primer OPA 5, OPA 8, OPA x, and OPA y. There was no result showed on PCR-RAPD result. PCR-RAPD is not adequate for describing the genetic diversity of captive Sumatran elephant as the primer and optimal temperature was not obtained. Primer specificity affects the temperature optimizing process to achieve the optimal temperature for primer attachment. Thus, the PCR process can run well. As the optimal temperature cannot be reached, the PCR-RAPD process fail to show DNA. PCR and GAPDH primer were tried. The DNA amplification, followed by sequencing process through PT. Genetika Science. Sumatran elephant's DNA is obtained with the length of 218 bp.

**Keywords:** sumatran elephant, Way Kambas National Park, RAPD, GAPDH

## Sertifikat ICBS 2019



